

## **CERTIFICATE OF ANALYSIS**

Shore tank:

11

File:

EC08 / BO1120

Location: Product\*: Sprague, Quincy Residual Fuel Oil As At: Movement:

12/13/08 After discharge

\*As designated by client

ex "DBL-105"

The following analytical results were obtained from a volumetric composite of samples drawn from shore tanks.

PRODUCT PROPERTY	<u>METHOD</u>	RESULT
API Gravity, °API	D-4052	12.1
Ash content, wt %	D-482	0.085
Asphaltenes, wt%	IP-143	0.50
Carbon Residue, wt%	D-524	7.77
Flash Point - PMCC, °F	D-93	202
Heat of Combustion, BTU/lb	D-240	18390
Heat of Combustion, BTU/gal	D-240	150914
Nitrogen, wt%	D-4629	0.312
Pour Point, °F/°C	D-97	64/18
Sediment by Extraction, wt%	D-473	0.059
Sodium, ppm	AAS	<5
Sulfur, wt%	D-4294	0.4952
Vanadium, ppm	AAS	<5
Viscosity @ 50 °C (122 °F), cSt	D-445	344.90
Viscosity @ 50 °C (122 °F), SSF	D-2161	162.9
Water & Sediment, vol%	D-1796	0.15
Water by Distillation, vol%	D-95	< 0.05
Aluminum, ppm	AAS	167
Silicon, ppm	AAS	160

## RESULTS ARE VALID "AS AT" DATE AND LOCATION LISTED

Samples are retained for a period of 30 days unless otherwise requested in writing

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